

**REMARKS**

In view of the following remarks, the Examiner is respectfully requested to withdraw all of the remaining rejections and allow Claims 50-52; 55-60, 62-64, 66-68, 71-73 and 76-84, the only claims pending and currently under examination in this application following entry of the above amendments.

It is noted that the front page of the Examiner's action indicates that only Claims 50-52 and 54-68 are pending. However, upon review of the file history of the present application, it is believed that Claims 50-52, 55-60, 62-64, 66-68, **71-73** and **76-84** are pending. As such, the Examiner is respectfully urged to review the file history with respect to which claims are pending.

Claims 50, 58, 59, 60, 62, 63, 64, 66, 67 and 71 have been amended to include the limitations of Claims 54, 61, 65 and 75 so that the claims include a step of subtracting signal obtained from at least one background feature. Claims 54, 61, 65 and 75 have correspondingly been canceled. In addition, the claims have been amended to recite the hybridization conditions in an alternative manner. Support for this amendment is found at page 27, lines 12 to 16, which reads:

Hybridization generally takes from about 30 minutes to about 24 hours, and occurs at the highest specificity approximately 10-25°C below the temperature ( $T_m$ ) at which the nucleotide hybrid is 50% melted. The  $T_m$  for a particular hybridization pair will vary with the length and nature of the nucleotides and may be readily determined by those of ordinary skill in the art.

As the above amendments merely introduce an element of previously pending dependent claims into the independent claims, the above amendments introduce no new matter to the application and their entry by the Examiner is respectfully requested.

Claims 50-52 and 54-68 remain rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dehlinger in view of Fodor, Blanchard and Brink. In maintaining this rejection, the Examiner asserts that since Dehlinger suggests the use of negative control probes, Fodor and Blanchard disclose arrays of all possible oligomers of the lengths of probes of the present invention, and that Brink discloses the use of control sequences, the subject claims are obvious.

As amended, all of the claimed methods require a step of subtracting signal generated from the specific background features of the present invention from a signal generated from another feature on the array. As such, the claims specifically require that one use signal obtained from the specifically claimed types of background features of the arrays as background signal. For example, in certain claims the background features are: "empirically observed inactive probe that does not hybridize to a fully complementary fluorescently labeled target nucleic acid as determined in an assay wherein said probe is provided in an array that is contacted with said fluorescently labeled fully complementary target under said hybridization conditions." In other claims, the background features are chose from SEQ ID NOS: 05-32. In yet other claims, the background features are "(i) a probe nucleic acid that forms a stable intramolecular structure; (ii) a probe nucleic acid that comprises reverse polarity nucleotide analogs; and (iii) a probe nucleic acid that comprises abasic phosphodiester."

Nowhere in the cited references is there a teaching or suggestion to use these specific types of probes as background features, or to take signal generated from these features as subtract it from signal obtained from other features, i.e., use the feature as a background feature.

Specifically, while the combined teachings of the references may teach an array of all possible 13mers, there is no guidance or suggestion to use one of the probes that would be expected to bind to a target sequence because of sufficient complementary as a background probe. Nor is there any suggestion to use the specific SEQ ID NOS. 05 to 32 as background probes. Nor is there any suggestion to use: (i) a probe nucleic acid that forms a stable intramolecular structure; (ii) a

probe nucleic acid that comprises reverse polarity nucleotide analogs; or (iii) a probe nucleic acid that comprises abasic phosphodiester; as a background feature.

Accordingly, it is respectfully submitted that a teaching of an array of all possible 13 mers and the desirability to use other types of probes not specified in the pending claims as background features is insufficient to obviate the pending claims, because the pending claims require that one employ specific types of background features, which specific types are neither taught nor suggested by the prior art as suitable for use as background features.

As such, none of the cited references teach or suggest the claimed invention and the rejection of Claims 50-52 and 54-68 as obvious under 35 U.S.C. § 103 (a) as being unpatentable over Dehlinger in view of Fodor, Blanchard and Brink may be withdrawn.


Finally, with respect to remaining pending claims 71-73 and 76-84 that were not rejected in the Final Rejection, it is understood by the Applicant that these claims were not rejected because they are viewed as allowable by the Examiner. Accordingly, the Examiner is respectfully requested to explicitly indicate on the record that these claims are allowed.

**Conclusion**

The Applicant respectfully submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Gordon Stewart at (650) 485-2386. The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

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By:   
Bret E. Field  
Registration No. 37,620